

UF-1 Definition

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UF-1 Resources

- Launch: 1/13/2000
- Duration of Shuttle stay: 10 days?
- Crew time: <20 hr/wk at UF-1 and decreases to ~4 hr/wk in 2002.
 - Program is pushing telescience ops
- Power
 - Minimum continuous power <1kW with power dropouts occurring during assembly
 - Total available power 7kW
- STS Middeck Lockers: 2 powered middeck lockers per flight
- Current UF-1 Payload (23% Lab outfitting)
 - HRF
 - 2 Express Racks
 - Stowage
- **HOWEVER**
 - UF-1 is the start of Increment 5
 - Increment 5 also contains UF-2 flight and 2 other assembly flights
 - Increment 5 = 1/13/00 - 6/00



EXPRESS Rack Candidate Payloads

UF-1 or UF-2

Advanced Separations (ADSEP)
Aerogel
Advanced Protein Crystallization Facility (APCF)
Astroculture
Avian Development Facility (ADF)
BioDyn
BioMass Production System
BTSC
Commercial ITA Biomedical Experiments (CBIX)
Commercial Generic Bioprocessing Apparatus (CGBA)
Contact Lens Material Manufacturing Facility (CLMMF)
Commercial Protein Crystal Growth (CPCG)
Commercial Refrigeration/Incubation Module (CRIM)
DCAM/STES
DOD Payloads
Dynamically Controlled Protein Crystal Growth-T, C, V (DCPCG-T, C, V)
Microgravity Acceleration Measurement System (MAMS)
Microencapsulation Electrostatic Processing System (MEPS)
Microbiology (HRF Saliva Collection Kit)
Next Generation Thermal Carrier (NGTC)
Non-Linear Optical (NLO)
Physics of Colloids in Space (PCS)
Space Acceleration and Measurement System (SAMS) II
Window Observational Research Facility (WORF)
Zeolite Crystal Growth (ZCG)



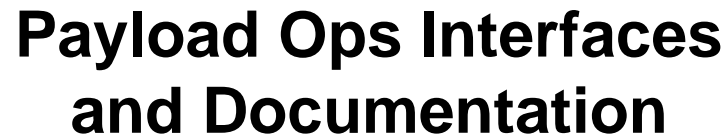
ETOV Ops

- ETOV = Earth-to-Orbit Vehicle
- Joint Ops - time during which the ETOV is docked with ISS
- Joint Ops TL is produced by JSC
- Includes any payload activity that needs to occur during transport (flight up) or transfer (movement of stuff between ISS and STS)
 - HRF sample collection
 - Powered Middeck payload checks
 - Transport, test and checkout of Racks
 - JSC SSCC responsibility
 - Transfer, test and checkout of Payloads
 - MSFC POIC responsibility
- Very little, if any actual payload ops will be conducted during Joint Ops during assembly. Just not enough time.
 - 3 EVA's and lots of assembly type activities
- Requirements must be documented in the MIP and MIP annexes
 - MIP = Mission Integration Plan (= PIP)
 - Some MIP annexes have been deleted. How we 'officially' submit these requirements to MOD is still being worked. I'm fighting for a simple memo rather than a big, fancy document!



On-Orbit Requirements

- IDR Increment Definition and Requirements Document
 - Top-level Increment Requirements
 - Defines resource allocations
 - ~IPRD
- Payload Requirements
 - PIA - Payload Integration Agreement
 - ~ IIA, O&IA combined
 - Payload Data Sets
 - Planning, Payload Ops, Training, Ground Services





Concerns/Issues

- Need to have EPA “team” carved out
 - Lots of man-power being exerted on IP and Programmatic issues
 - These issues don’t really impact PL ops for YEARS
 - Each team needs to assign at least 1 person that is responsible to ensure that team is ready for UF-1/EPA Ops Integration
 - User inputs will start coming in in Jan 98!
 - Do you have your processes ready to actually do something with those inputs?
 - This person could also be the Team’s Point of Contact for UF-1/EPA stuff
 - Not trying to carve out an UF-1 team ala Spacelab
 - “EPA Team leads” would work with generic capability development folks, document managers, or systems managers to ensure ready for UF-1 Ops Integration.
 - This concept would create another level of matrixing within POIF
 - But can you think of a better way?